

WHAT IS CLAIMED IS:

1. A video signal connection apparatus comprising:

(a) an array of individual video signal connector contacts arranged in connector rows along an x-axis and connector columns along a y-axis;

(b) a first connector having individual connector contacts corresponding in number to said individual video signal connector contacts of said array;

10 (c) conductors interconnecting said individual video signal connector contacts to said individual connector contacts;

(d) a second connector having individual connector contacts electrically engaged with said individual connector contacts of said first connector; and

15 (e) a signal processing unit connected to said individual connector contacts of said second connector,

 said first connector and said second connector being aligned along one of said x-axis and said y-axis.

20 2. The video signal connection apparatus claimed in claim 1, where at least some portion of each of said conductors is aligned with said first connector and said second connector.

3. The video signal connection apparatus claimed in claim 1, wherein said signal processing unit is aligned with said first connector and said second connector.

25 4. The video signal connection apparatus claimed in claim 2, wherein said signal processing unit is aligned with said first connector and said second connector.

5. A video signal connection apparatus, comprising:

(a) an array of individual video signal connector contacts arranged in connector rows along an x-axis and connector columns along a y-axis;

5 (b) a first connector having individual connector contacts corresponding in number to said individual video signal connector contacts of said array;

(c) conductors interconnecting said individual video signal connector contacts to said individual connector contacts;

10 (d) a second connector having individual connector contacts electrically engaged with said individual connector contacts of said first connector; and

(e) a signal processing unit connected to said individual connector contacts of said second connector,

15 video signal contacts of a row of said array of individual video signal connector contacts, said first connector, said second connector and said signal processing unit being disposed in linewise succession.

6. A video signal connection apparatus, comprising:

20 (a) an array of individual video signal connector contacts arranged in connector rows along an x-axis and connector columns along a y-axis;

(b) a first connector having individual connector contacts corresponding in number to said individual video signal connector contacts of said array;

(c) conductors interconnecting said individual video signal connector contacts to said individual connector contacts;

(d) a second connector having individual connector contacts electrically engaged with said individual connector contacts of
5 said first connector; and

(e) a signal processing unit connected to said individual connector contacts of said second connector,

video signal contacts of a column of said array of individual video signal connector contacts, said first connector, said second
10 connector and said signal processing unit being disposed in linewise succession.

7. A video signal connection apparatus comprising:

(a) an array of individual video signal connector contacts arranged in a matrix having connector rows and connector columns;

15 (b) a first connector having individual connector contacts corresponding in number to said individual video signal connector contacts of said array, said individual connector contacts being connected individually to said individual video signal connector contacts; and

20 (c) a system expansion device having individual input contacts corresponding in number to said individual connector contacts and connected therewith, and first and second sets of output contacts, each output contact set having output contacts corresponding in number to said individual input contacts of said system expansion
25 device, each output contact of each output contact set being

connected to an individual one of said individual input contacts of said system expansion device.

8. The video signal connection apparatus claimed in claim 7, wherein contacts of said array extend in a first connection direction and wherein said individual input contacts of said system expansion device extend in a second connection direction orthogonal to said first connection direction.

9. The video signal connection apparatus claimed in claim 7, wherein said output contacts of said first output contact set of said system expansion device extend in a connection direction orthogonal to a connection direction of said output contacts of said second output contact set of said system expansion device.

10. The video signal connection apparatus claimed in claim 8, wherein said output contacts of said first output contact set of said system expansion device extend in a connection direction orthogonal to a connection direction of said output contacts of said second output contact set of said system expansion device.

11. The video signal connection apparatus claimed in claim 7, further including conductors interconnecting said individual connector contacts to said individual video signal connector contacts of said array, said conductors extending in said second connection direction.

12. The video signal connection apparatus claimed in claim 8, further including conductors interconnecting said individual connector contacts to said individual video signal connector

contacts of said array, said conductors extending in said second connection direction.

13. The video signal connection apparatus claimed in claim 9, further including conductors interconnecting said individual connector contacts to said individual video signal connector contacts of said array, said conductors extending in said second connection direction.

14. The video signal connection apparatus claimed in claim 10, further including conductors interconnecting said individual connector contacts to said individual video signal connector contacts of said array, said conductors extending in said second connection direction.

15. The video signal connection apparatus claimed in claim 7, further including a second connector having an input contact set having contacts corresponding in number to said output contacts of said system expansion device first contact set and connected therewith.

16. The video signal connection apparatus claimed in claim 15, further including a signal processing unit connected to said input contacts of said second connector contact set.

17. The video signal connection apparatus claimed in claim 15, wherein said contacts of said second connector input contact set extend in said second connection direction.

18. The video signal connection apparatus claimed in claim 16, wherein said system expansion device is separable from said first

connector and wherein said signal processing unit is separable from said system expansion device.

19. A video signal connection apparatus comprising:

(a) an array of individual video signal connector contacts arranged in connector rows along an x-axis and connector columns along a y-axis;

(b) a first connector having individual connector contacts corresponding in number to the individual video signal connector contacts of the array;

(c) conductors interconnecting the individual video signal connector contacts to the individual connector contacts;

(d) a second connector having individual connector contacts electrically engaged with the individual connector contacts of the first connector; and

(e) a signal processing unit connected to the individual connector contacts of the second connector,

 said first connector and the second connector being aligned along one of the x-axis and the y-axis.

20. A video signal connection apparatus comprising:

(a) an array of individual video signal connector contacts arranged in a matrix having connector rows and connector columns, said individual video signal connector contacts extending in a first connection direction;

(b) a connector having individual connector contacts corresponding in number to said individual video signal connector

contacts of said array, said individual connector contacts extending in a second connection direction, said second connection direction being orthogonal to said first connection direction; and

(c) conductors interconnecting said individual video signal

5 connector contacts to said individual connector contacts.

21. The video signal connection apparatus claimed in claim 20, further comprising a second connector having individual connector contacts electrically engaged with said individual connector contacts of said first-mentioned connector and extending in said

10 second connection direction.

22. The video signal connection apparatus claimed in claim 21, further comprising a signal processing unit connected to said individual connector contacts of said second connector.

23. The video signal connection apparatus claimed in claim 22, wherein said first-mentioned and said second connectors are separable from one another, said second connector being removable from said video signal connection apparatus with said signal processing unit upon separation of said first-mentioned and said second connectors.

20 24. The video signal connection apparatus claimed in claim 22, wherein said individual video signal connector contacts are supported on a substrate, said substrate extending jointly in said second connection direction with at least a portion of said signal processing unit.

25. The video signal connection apparatus claimed in claim 24, further comprising releasable interlocking means disposed on said substrate at the location of said at least a portion of said signal processing unit for releasably interlocking said signal processing unit to said substrate.

~~26.~~ A video signal connection apparatus comprising:

(a) an array of individual video signal connector contacts arranged in a matrix having connector rows and connector columns, said individual video signal connector contacts extending in a first connection direction;

(b) a first connector having individual connector contacts corresponding in number to said individual video signal connector contacts of said array, said individual connector contacts extending in a second connection direction, said second connection direction being orthogonal to said first connection direction;

(c) conductors interconnecting said individual video signal connector contacts to said individual connector contacts;

(d) a second connector having individual connector contacts electrically engaged with said individual connector contacts of said first connector and extending in said second connection direction; and

(e) a signal processing unit connected to said individual connector contacts of said second connector and aligned with said individual connector contacts of said first and second connectors.

27. The video signal connection apparatus claimed in claim 26,
wherein said first and said second connectors are separable from
one another, said second connector being removable from said video
signal connection apparatus with said signal processing unit upon
5 separation of said first and said second connectors.

28. The video signal connection apparatus claimed in claim 26,
wherein said individual video signal connector contacts are
supported on a substrate, said substrate extending jointly in said
second connection direction with at least a portion of said signal
10 processing unit.

29. The video signal connection apparatus claimed in claim 28,
further comprising releasable interlocking means disposed on said
substrate at the location of said at least a portion of said signal
processing unit for releasably interlocking said signal processing
15 unit to said substrate.

30. A video signal connection apparatus comprising:

(a) an array of individual video signal connector contacts
arranged in an x-axis, y-axis matrix, said array individual video
signal connector contacts extending in a z-axis direction;

20 (b) a connector having individual connector contacts
corresponding in number to said individual video signal connector
contacts of said array, said individual connector contacts
extending in the direction of said y-axis; and

25 (c) conductors interconnecting said individual video signal
connector contacts of said array to said individual connector
contacts.

31. The video signal connection apparatus claimed in claim 30,
further comprising a second connector having individual connector
contacts electrically engaged with said individual connector
contacts of said first connector and extending in the direction of
5 said y-axis.

32. The video signal connection apparatus claimed in claim 31,
further comprising a signal processing unit connected to said
individual connector contacts of said second connector.

33. The video signal connection apparatus claimed in claim 32,
10 wherein said first and second connectors are separable from one
another, said second connector being removable from said video
signal connection apparatus with said signal processing unit upon
separation of said first and second connectors.

34. The video signal connection apparatus claimed in claim 32,
0015 wherein said individual video signal connector contacts of said
array are supported on a substrate, said substrate extending
jointly with at least a portion of said signal processing unit.

35. The video signal connection apparatus claimed in claim 34,
further comprising releasable interlocking means disposed on said
20 substrate at the location of said at least a portion of said signal
processing unit for releasably interlocking said signal processing
unit to said substrate.

36. A video signal connection apparatus comprising:

(a) an array of individual video signal connector contacts

arranged in an x-axis, y-axis matrix, said array individual video signal connector contacts extending in a z-axis direction;

(b) a connector having individual connector contacts corresponding in number to said individual video signal connector contacts of said array, said individual connector contacts extending in the direction of said x-axis; and

(c) conductors interconnecting said individual video signal connector contacts of said array to said individual connector contacts.

10 37. The video signal connection apparatus claimed in claim 36, further comprising a second connector having individual connector contacts electrically engaged with said individual connector contacts of said first connector and extending in the direction of said x-axis.

15 38. The video signal connection apparatus claimed in claim 37, further comprising a signal processing unit connected to said individual connector contacts of said second connector.

20 39. The video signal connection apparatus claimed in claim 38, wherein said first and second connectors are separable from one another, said second connector being removable from said video signal connection apparatus with said signal processing unit upon separation of said first and second connectors.

25 40. The video signal connection apparatus claimed in claim 38, wherein said individual video signal connector contacts of said array are supported on a substrate, said substrate extending jointly with at least a portion of said signal processing unit.

41. The video signal connection apparatus claimed in claim 40, further comprising releasable interlocking means disposed on said substrate at the location of said at least a portion of said signal processing unit for releasably interlocking said signal processing unit to said substrate.

~~42.~~ A video signal connection apparatus comprising:

(a) an array of individual video signal connector contacts arranged in a matrix having connector rows and connector columns, said individual video signal connector contacts extending in a first connection direction;

(b) a first substrate supporting said individual video signal connector contacts, said first substrate extending in a second connection direction, said second connection direction being orthogonal to said first connection direction; and

(c) a signal processing unit supported on a second substrate, a portion of said second substrate being juxtaposed with a portion of said first substrate along said second connection direction.

~~43.~~ In a CCTV system comprising N video cameras, a back panel having N connectors for receiving video output signals of said N video cameras, and M signal processors connected to said back panel N connectors, M being a submultiple of N, the improvement wherein said M signal processors are supported on a common substrate and latching means is provided for mutually securing said substrate and

60 said back panel, said latching means being user operable for releasing the securement of said substrate and said back panel.

65 44. The invention claimed in claim 43, wherein said common substrate includes a cover secured thereto, said latching means 5 being disposed on said back panel and being engageable with said cover at opposite side margins of said cover.

70 45. The invention claimed in claim 44, wherein said latching means is accessible exteriorly of said cover for operation of said latching means.

75 46. The invention claimed in claim 43, wherein said back panel includes first and second connectors matable with third and fourth connectors disposed on said substrate.

80 47. The invention claimed in claim 43, wherein said first connector is connected to said back panel N connectors and said second connector is connected to input terminals of said M signal 15 processors.

85 48. The invention claimed in claim 47, wherein said back panel includes further connectors and wherein output signals of said M signal processors are connected through said third and fourth 20 connectors to said further connectors of said back panel.

90 49. The invention claimed in claim 45, wherein said latching means is accessible through recesses extending inwardly from side margins of said cover.

95 50. The invention claimed in claim 45, wherein said M signal 25 processors are multiplexers.